

Practitioner's Docket No. 944-003.086

PATENT

Preliminary Classification:

Proposed Class:

Subclass:

NOTE:

"All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129 " M.P.E.P. § 601, 7th ed



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Andrei Malkov, Heikki Berg, Pekka Kaasila, Kiran Kumar Kuchi

and Jan C. Olivier

WARNING: 37 C.F.R.§ 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1 63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(l) is filed supplying or changing the name or names of the inventor or inventors."

For (title): SOFT BIT COMPUTATION FOR A REDUCED STATE EQUALIZER

CERTIFICATION UNDER 37 C.F.R. § 1.10*

(Express Mail label number is mandatory) (Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date, August 13, 2001, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EL762541637US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Judith Schick

(type or print name of person mailing paper)

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing

label placed thereon prior to mailing, 37 C.F.R. § 1.10(b).

Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at

56,442

WARNING:

(New Application Transmittal [4-1] page 1 of 11)

1. Type of Application

This new application is for a(n) (check one applicable item below) ☑ Original (nonprovisional) □ Design ☐ Plant WARNING: "Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 37(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application. WARNING: Do not use this transmittal for the filing of a provisional application. If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION. Divisional П Continuation Continuation-in-part (C-I-P)

2. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designated the United States of America; or
- (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(I) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120,121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C §§ 199, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-byclaim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

WARNING:		Fe the	hen the last day of pendency of a provisional application falls on a Saturday, Sunday, or deral holiday within the District of Columbia, any nonprovisional application claiming benefit of provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within pDistrict of Columbia. See 37 C.F.R. § 1.78(a)(3).				
]	ap Ti	ne new application being transmitted claims the benefit of prior U.S. oplication(s). Enclosed are ADDED PAGES FOR NEW APPLICATION RANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) LAIMED.				
3.	Pape	ers Er	nclosed				
	21 	Desig Page: Page:	red for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 1.153 (n) Application s of specification s of claims s of drawings				
	WARI	NING:	DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O G. 57-62).				
	NOTE	inv if ti be	"Identifying indicia, if provided, should include the application number or the title of the invention inventor's name, docket number (if any), and the name and telephone number of a person to if the Office is unable to match the drawings to the proper application. This information shape be placed on the back of each sheet of drawing a minimum distance of 1.5 cm (5/8 inch) of from the top of the page " 37 C.F.R. § 1.84(c)).				
			(complete the following, if applicable)				
	Ε	"P	e enclosed drawing(s) are photograph(s), and there is also attached a ETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. § 34(b).				
		"P	e enclosed drawing(s) are in color. Three (3) sets of color drawings and a ETITION TO ACCEPT COLOR DRAWING(S)" are attached. 37 C.F.R. §§ 34(a)(2) and 1.84(b).				
		d for info	mal ormal				
	B. C	ther I	Papers Enclosed				
	_1F	Pages	of declaration and power of attorney of abstract (title page)				
4.	Addit	tional	papers enclosed				
	□ A	mend	lment to claims				
	Cancel in this application claimsbefore calculating filing fee. (At least one original independent claim must be retained for filing purposes.)						
	□ A	dd the umbe	e claims shown on the attached amendment. (Claims added have been red consecutively following the highest numbered original claims.)				

	Preliminary Amendment
	Information Disclosure Statement (37 C.F.R. § 1.98)
	Form PTO-1449 (PTO/SB/08A and 08B)
	Citations
	Declaration of Biological Deposit
	Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence
	Authorization of Attorney(s) to Accept and Follow Instructions from Representative
	Special Comments
	Other
5. De	claration or oath (including power of attorney)
NOTE:	A newly executed declaration is not required in a continuation or divisional application provided that the prior nonprovisional application contained a declaration as required, the application being filed is by all or fewer than all the inventors named in the prior application, there is no new matter in the application being filed, and a copy of the executed declaration filed in the prior application (showing the signature or an indication thereon that it was signed) is submitted. The copy must be accompanied by a statement requesting deletion of the names of person(s) who are not inventors of the application being filed. If the declaration in the prior application was filed under § 1.47, then a copy of that declaration must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning person under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently executed declaration must be filed. See 37 C.F.R. §§ 1.63(d)(1)-(3).
NOTE: A declaration filed to complete an application must be executed, identify the specification to a directed, identify each inventor by full name including family name and at least one given without abbreviation together with any other given name or initial, and the residence, produced address and country or citizenship of each inventor, and state whether the inventor is a so inventor. 37 C.F.R. § 1.63(a)(1)-(4).	
NOTE:	"The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(l) is filed supplying or changing the name or names of the inventor or inventors." 37 C.F.R § 1.41(a)(1).
	□ Enclosed
	Executed by
	(check all applicable boxes)
	 □ inventor(s). □ legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43. □ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
	s is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 F.R. § 1.47 is also attached. See item 13 below for fee.
⊠ Not	t Enclosed

NO	TE:	the may FO	U.S. y be t	ne filing is a completion in the U.S. of an International Application or where the completion of application contains subject matter in addition to the International Application, the application reated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE RW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION D.
				Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of <i>all</i> the above named inventor(s).
(The	deci	larat	ion or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).
				☐ Showing that the filing is authorized. (not required unless called into question. 37 C.F.R. § 1.41(d))
6.	lnv	ente	orsh	ip Statement
WA	RNIN	IG:	owr	e named inventors are each not the inventors of all the claims an explanation, including the ership of the various claims at the time the last claimed invention was made, should be nitted.
The	e inv	ento	orshi	p for all the claims in this application is:
		The	e sa	me.
				or
	_			
				same. An explanation, including the ownership of the various claims me the last claimed invention was made,
			is s	ubmitted.
			will	be submitted
7.	Laı	ngua	age	
NO	TE:	An . requ	Engli. ıired	ation including a signed oath or declaration may be filed in a language other than English. In translation of the non-English language application and the processing fee of \$130.00 by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within such time as may the Office. 37 C.F.R. § 1.52(d).
		X		English Non English
				The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).
8.	Ass	sign	mei	ıt
		X	An	assignment of the invention to Nokia Mobile Phones Ltd.
				is attached. A separate □ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or □ FORM PTO 1595 is also attached. will follow.
NOT	ΓE:			signment is submitted with a new application, send two separate letters-one for the n and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).

(New Application Transmittal [4-1] page 5 of 11)

WA	KNING:					37 C.F.R. § 3.7 ignee. Notice of A		
						ion and the a		
							Reel	
							Frame	
9.	Certifie	ed Copy						
	Certifie	d copy(ies	s) of applic	ation(s)				
	Country	y		Aı	opln. No.			Filed
	Country	v	,	Aı	opln. No.			Filed
fr∩r		priority is	claimed:	·	•			
		is (are) a	ttached.					
NO:	deci TE: This U.S. § 12 PAC	laration. 37 (s item is for . application 20 is itself er GES FOR	C.F.R. § 1.55 any foreign p or Internation ntitled to prior	i(a) and 1.63. Priority for which Inal Application Pity from a prior PLICATION T	h the appli from which foreign ap	m for priority mus ication being filed h this application plication, then co TAL WHERE I	l directly relates. claims benefit ur mplete item 18 d	If any parent nder 35 U.S.C. on the ADDED
10.	Fee Ca A. ⊠		(37 C.F.R ular applica	ation	S AS FIL	ED		
Nur	mber file	ed		Number E	xtra	Rate	37 C.F.R	Fee . § 1.16(a) 0.00
	al Claim C.F.R.	s § 1.16(c))	29 =	9	х	\$18.00 =		162.00
		nt Claims § 1.16(b))	-3 =	0	x	\$80.00 =		
		pendent c C.F.R. § 1			+	\$260.00	J	
		Amendm	ent deletin	ing extra cla g multiple-o s is not bein	lepender	ncies is enclos	ed.	
NO1	ame	endment, pric ce in any not	or to the exp	iration of the ti ficiency. 37 C.I	me period	they must be par set for response (d).	by the Patent a	nd Trademark
		1 111112	ji ee Calc	uiatiOII	(New Application	\$ Transmittal [4-1]	872.00 page 6 of 11)
					,	z		~~9~~~ii/

В.		Design applicat (\$310.00 – 37 0		R. § 1.16(f))	
			Fili	ng Fee Calculation	\$
C.		Plant applicatio	n		
	(\$4	80.00 - 37 C.F.F	l. §	1.16(g))	
			Fili	ng Fee Calculation	\$
		ty Statement(s)			
		ent(s) that this is attached.	a fi	ling by a small entity under 3	7 C.F.R. §§ 1.9 and 1.27
"Status as a small entity must be specifically established in each application or patent in which the status is available and desired. Status as a small entity in one application or patent does not affect any other application or patent, including applications or patents which are directly indirectly dependent upon the application or patent in which the status has been established. The refiling of an application under § 1.53 as a continuation, division, or continuation-in-patent (including a continued prosecution application under § 1.53(d)), or the filing of a reissual application requires a new determination as to continued entitlement to small entity status for the continuing or reissue application. A nonprovisional application claiming benefit under 35 U.S.6 § 119(e), 120, 121, or 365(c) of a prior application, or a reissue application may rely on statement filed in the prior application or in the patent if the nonprovisional application or the reissue application includes a reference to the statement in the prior application or in the patent and status as a small entity is still proper and desired. The payment of the small entity basic statutory filing fee will be treated as such a reference for purposes of this section." 37 C.F.R. § 1.28(a)(2).				e application or patent does not repatents which are directly or estatus has been established. division, or continuation-in-part dl), or the filing of a reissue ent to small entity status for the laiming benefit under 35 U.S.C. sue application may rely on a conprovisional application or the porior application or in the patent the patent and status as a small the basic statutory filing fee will be	
WARNING:	state	nall entity status mu ement can unequiv 2, July 1996 (empha	ocall	ot be established when the person y make the required self-certification added).	on or persons signing the n." M P.E.P., § 509.03, 6 th ed.,
		(0	com	plete the following, if applicat	ole)
		Status as a sm	all e	ntity was claimed in prior app	
		benefit is being	clai	, filed on med for this application unde	, from which
		35 U.S.C. §			
				he statement in the prior appl	
				Calculation (50% of A , B , or c	
				\$	·
NOTE:	filed v	xcess of the full fee point of the contract of	he da	will be refunded if a small entity stat ate of timely payment of a full fee. c.F.R. § 1.28(a).	ement and a refund request are The two-month period is not
12. Requ	est fo	or International-	Тур	e Search (37 C.F.R. § 1.104	(d))
			(co	omplete, if applicable)	
				ional-type search report for the on the merits takes place.	nis application at the time

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13. Fee Payment Being Made at This Time

×	Not	Enclosed	
		No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. § 1.16(e) can subsequently.)	be paid
	Enc	losed	
		Filing fee	\$
		Recording assignment (\$40.00 – 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION.")	\$
		Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. (\$130.00 – 37 C.F.R. §§ 1.47 and 1.17(i))	\$
		, , , , , , , , , , , , , , , , , , ,	Φ
		For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$
		Processing and retention fee (\$130.00, 37 C.F.R. §§ 1.52(d) and 1.21(l))	\$
		Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$
NOTE:	for fa to 37 appli	F.R. § 1.21(I) establishes a fee for processing and retaining any applicati- iling to complete the application pursuant to 37 C.F.R. § 1.53(f) and this, as 7 C.F.R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain the be- cation, either the basic filing fee must be paid, or the processing and rete- be paid, within 1 year from the notification under § 53(f).	s well as the changes enefit of a prior U.S.
	Tota	al fees enclosed	\$
14. Me	thod	of Payment of Fees	
	Atta	ched is a \square check \square money order in the amount of $\$$	
	Auth	orization if hereby made to charge the amount of \$	
		to Deposit Account No	
		to credit card as shown on the attached credit card informauthorization form PTO-2038	mation
		rge any additional fees required by this paper or credit any o manner authorized above. A duplicate of this transmittal is a	
NOTE:		should be itemized in such a manner that it is clear for which purpose t R. § 1.22(b).	he fees are paid. 37

15. Authorization to Charge Additional Fees

change is to another small entity.

WARNIN	IG:	If no fees are to be paid on filing, the following items should <u>not</u> be completed.				
WARNING:		Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.				
		The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No				
		□ 37 C.F.R. § 1.16(a), (f), or (g) (filing fees) □ 37 C.F.R. § 1.16(b), (c), and (d) (presentation of extra claims)				
NOTE:	pres time migi	ause additional fees for excess or multiple dependent claims not paid on filing or on later sentation must only be paid or these claims canceled by amendment prior to the expiration of the experiod set for response by the P.T.O. in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it has best not to authorize the P.T.O. to charge additional claim fees, except possibly when ling with amendments after final action.				
		☐ 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)				
		☐ 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a))				
		□ 37 C.F.R. § 1.17 (application processing fees)				
WARNING:		"A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).				
		☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))				
NOTE:	of a	ere an authorization to charge the issue fee to a deposit account has been filed before the mailing Notice of Allowance, the issue fee will be automatically charged to the deposit account at the of mailing the Notice of Allowance. 37 C.F.R. § 1.311(b).				
NOTE:	sma issu	C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to II entity status must be filed in the application prior to paying, or at the time of paying, e fee." From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be le even if the fee is paid as "other than a small entity" and (b) no notification is required if the				

16. Instructions as to Overpayment

Customer No. 004955

NOTE:	reas	Amounts of twenty-five dollars or less will not sonable time, nor will the payer be notified of s eturned by check or, if requested, by credit to a	be returned unless specifically requested within a uch amounts; amounts over twenty-five dollars may a deposit account." 37 C.F.R. § 1.26(a).
		Credit Account No.	
		Refund	
Date: A	Aug	ust 13, 2001	andrew 7. Hyman
Reg. N	0. 4	45,858	SIGNATURE OF PRACTITIONER
Tel. No	o. (2 0	03) 261-1234	Andrew T. Hyman
			(type or print name of practitioner
			Ware, Fressola, Van Der Sluys & Adolphson, LLP
			P.O. (Correspondence) Address
			Building Five, Bradford Green 755 Main Street, P.O. Box 224 Monroe, CT 06468

Inc	Incorporation by reference of added pages					
(check the following item if the application in this transmittal claims the benefit of price U.S. application(s) (including an international application entering the U.S. stage as continuation, divisional or C-I-P application) and complete and attach the ADDE PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOUS. APPLICATION(S) CLAIMED.)						
	Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed					
	Number of pages added					
	Plus Added Pages for Papers Referred to in Item 4 Above					
	Number of pages added					
	Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.					
	Number of pages added					
	Plus "Assignment Cover Letter Accompanying New Application"					
	Number of pages added					
Sta	tement Where No Further Pages Added					
	(if no further pages form a part of this Transmittal, then end this Transmittal with this page and check the following item.					
X	This transmittal ends with this page					